

[illegible]
$$\begin{aligned} & \left(\frac{1}{\sqrt{2}} \begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix} \right)^{\dagger} \left(\frac{1}{\sqrt{2}} \begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix} \right) = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix} \\ & \left(\frac{1}{\sqrt{2}} \begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix} \right)^{\dagger} \left(\frac{1}{\sqrt{2}} \begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix} \right) = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix} \end{aligned}$$

A system and method for providing Internet broadcasting data based on hierarchical structure, which can reduce a bottleneck problem due to data congestion. The method for providing Internet broadcasting data includes the steps of; a) if a connection request signal is received from a first terminal, determining whether a number of terminals connected to a server is smaller than a threshold value; b) if the number of the terminals connected to the server is smaller than the threshold value, transmitting broadcasting data to the first terminal; and c) if the number of the terminals connected to the server is not smaller than the threshold value, leading the first terminal to try to connect a second terminal, wherein the second terminal is one of the terminals connected to the server.